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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/729,405

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Esin Terzioglu

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EXAMINER

NGUYEN, VIET Q

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,405

Applicant(s)

TERZIOGLU ET AL.

Examiner

Viet Q. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 1/10/2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-47, 49-52, 54, 56-61, 63, 65-69, 71 and 73 is/are rejected.
- 7) ☒ Claim(s) 48, 53, 55, 62, 64, 70 and 72 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims **44-73** are present for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims **44-47, 49-52, 54, 56-61, 63, 65-70, & 72** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaik et al (US 5,920,515)**.

Regarding claims **44-46, 49-51, 56-60, 66-68, & 73**, Shaik et al (see Fig. 3) clearly shows a method and structure for providing memory redundancy by either selecting the redundant predecoder (204a) when the failed address register indicating a failed address or selecting the normal predecoder (204b) when the failed address register does not indicate so. In this way, though the reference does not specifically spelled out the word "shifting in/out predecoder" as claimed, it would still be obvious to one skilled in this art that when one decoder is selected, it must be shifted into its use; and then the other must be deselected or shifted out of its useful work as well. For example, col. 5-6 describes the use of the address comparator circuits (301, 302) for selectively enable or disable one of the two types of predecoders (redundant 204a, normal 204b), and thus obviously only one type of predecoder can be present or active

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at any given time. In other words, one having ordinary skilled in the art can see that when/if one first pre decoder is selected in use, one predecoder would be shifted into work and the other type of second, predecoder must be deselected as a result, or obviously shifted out of work as well.

Regarding claims **45-46 & 50-51, 59-60, 68-69**, Fig. 3 shows that predecode address lines coupled to the shifting circuitry (301, 302) for shifting these lines into either the left predecoder (204a) or into the right predecoder (204b) as claimed;

Regarding claims **47, 52, & 61**, Fig. 4 shows that the second predecoder (412) is coupled with at least higher address predecoder lines (RA [7:4]);

Regarding claim **49, 57, 66** the shown predecoded-address shifting/enable circuitry (301, 302) is responsible for identifying at least one of first predecoder type (204a) or right predecoder type (204b), and then shift the predecoded lines into it accordingly;

Regarding claim **54, 63, 71**, the current address mapping is fired out from one of two predecoders (204) once shifted into work.

4. Claims **44-47, 49-52, 54, 56-61, 63, 65-70, & 72** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Azuma (US 6,167,540)**

Azuma (see Fig. 5) clearly shows a method and structure for providing memory redundancy by either selecting the right predecoder (404) when the failed address register indicating a failed address or selecting the normal predecoder (402) when the failed address register does not indicate so. In this way, though the reference does not

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specifically spelled out the word "shifting in/out decoder" as claimed, it would still be obvious to one skilled in this art that when one predecoder is selected, it must be shifted into its use, and then the other must be deselected or shifted out of its use as well. Note that all the predecode address lines (305a, 305b) go into the switch circuitry (address switches 318a, 410a) and being shifted in or out accordingly. For example, col. 11 (lines 1-20) describes the use of the address comparator circuits (310a, 310b, see Fig. 6) for selectively selecting or deselecting one of the two types of decoders (redundant 204a, normal 204b) to receive the entire address bits from ^{the} address buffer (307, Fig. 6), and thus obviously only one type of predecoder should be present or active at any given time. In other words, one having ordinary skilled in the art can see that when/if one first predecoder is selected in use, one predecoder would be shifted into work and the other type of predecoder must be deselected as a result, or obviously shifted out of work as well.

Regarding claims **45-46 & 50-51, 59-60, 68-69**, Fig. 5-6 shows that predecode address lines (305) are coupled to the shifting circuitry (318b) for shifting these lines into either the left predecoder (401) or into the right predecoder (403) as claimed;

Regarding claim **49, 57, 66**, the shown predecoded-address shifting/enable circuitry (318a, 318b) is responsible for identifying at least one of first predecoder type (402) or right predecoder type (404), and then shifts the predecoded lines into it accordingly;

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Regarding claims **54, 63, 71**, the current address mapping is fired out from one of two predecoders (204) and go directly into the memory cell arrays (401 or 403), accordingly, once shifted into work.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims **44, 45, 46, 47, 48, & 49** are being rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims **1 or 22, 23, 24, 2, & 3**, respectively in that order, of U.S. Patent No. **6,714,467 (Terzioglu)**. Although the conflicting claims are not identical in language, they are not patentably distinct from each other because the two sets of claims are drawing toward a similar addressing

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structure which both use the same method steps of predecoder/line shifting structures, and both also utilize "**address shifting**" concept from one/first type of predecoder into another/second type of predecoder.

7. Other claims are objected as being dependent upon rejected base claims; however, they contain the following allowable subject matter over the prior arts of record, which are either not clearly shown or suggested/seen elsewhere:

- Claims **48, 53, 62, & 70** recite the particular "pairing" of predecode higher/lower address lines associated with one of the predecoders;
- Claims **55, 64, & 72** recite the use of "previous address mapping" associated with at least one predecoder

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viet Q. Nguyen whose telephone number is (571) 272-1788. The examiner can normally be reached on 7am-6pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is 571-273-6300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VN
V. Nguyen
3/6/2006

V. Nguyen

**VIET Q. NGUYEN
PRIMARY EXAMINER**